

# ***The City of Willmar***



## **Safety Program/ Policies**

# TABLE OF CONTENTS

- Additional departmental specific policies/procedures/forms/etc. are available through the employees direct Supervisor
- Please note [hyperlinks](#) within. These will allow the employee to access the specific [OSHA](#) Standards, definitions, and clarifications.

<b>AWAIR (A Workplace Accident and Injury Reduction Program)</b> <i>Applicable to all employees</i>	<b>p. 2-7</b>
<b>Employee Right to Know/GHS</b> <i>Applicable to all employees</i>	<b>p. 8-10</b>
<b>Emergency Action Plan</b> <i>Applicable to all employees</i>	<b>p. 11</b>
<b>Bloodborne Pathogens</b> <i>Applicable to all employees</i>	<b>p. 12-15</b>
<b>Proper Lifting</b> <i>Applicable to all employees</i>	<b>p. 16</b>
<b>Operating City Vehicles</b> <i>Applicable to employees operating city vehicles</i>	<b>p. 17-18</b>
<b>Lockout/Tagout</b> <i>Applicable to employees performing maintenance activities</i>	<b>p. 19</b>
<b>Confined Space</b> <i>Applicable to all employees who may enter confined spaces</i>	<b>p. 20-24</b>
<b>Earthmoving Equipment</b> <i>Applicable to employees working around and operating earthmoving equipment</i>	<b>p. 25-26</b>
<b>Hearing Conservation</b> <i>Applicable to employees exposed to noises above 85 decibels</i>	<b>p. 27-31</b>
<b>Respiratory Protection</b> <i>Applicable to employees wearing respirators/dust masks</i>	<b>p. 32-33</b>
<b>Trenching</b> <i>Applicable to employees working around and entering trenches</i>	<b>p. 34-36</b>
<b>Tree Trimming</b> <i>Applicable to employees involved in tree trimming or chainsaw operations</i>	<b>p. 37-39</b>
<b>Hot Work Permit Program</b> <i>Applicable to employees involved in welding operations</i>	<b>p. 40-42</b>

# THE CITY OF WILLMAR SAFETY PROGRAM POLICY STATEMENT

The City of Willmar Management realizes that it has the responsibility to provide safe workplaces for its employees, and safe environments for its citizens. Each employee must pursue the highest standards in his or her assigned activities, and all city employees must recognize that the wellbeing of persons and the protection of our physical resources are as important as the activity and work being performed.

The City of Willmar has established a Loss Control Management Program meeting the requirements of the AWAIR Program ([MN Statute 182.653](#)). The city expects its management, Supervisors, Department Heads and employees to meet their assigned safest responsibilities, respond to all planned safety efforts, and perform their assigned jobs in the safest possible manner.

The Safety Coordinator will be assigned the responsibility of implementing, organizing and maintaining the overall Loss Control Management Program.

The Safety Coordinator will be our personal representative and will be responsible for the staff direction and administration of our safety program. The Safety Coordinator will periodically report to the city council of the status of the safety program.

In addition, a Safety Committee has been created to investigate major losses, loss trends, assign task force committees and to conduct other assigned activities. This committee is made up of a combination of management and employees (a representative from each major area in the city).

Each Supervisor will be responsible for the safety and wellbeing of their workers as well as the repair and maintenance of facilities and equipment in his/her area of responsibility. Supervisors and Department Heads will investigate all accidents/injuries and loss trends. All reports that relate to this program will be directed to the Safety Coordinator. Supervisors will be responsible for individual training of employees on specific safety rules/policies within their departments.

All city employees will complete their assigned tasks in a safe fashion based on the training they received, the city safety rules, [OSHA](#) standards, good safety practices, and any other appropriate guidelines.

The City of Willmar is committed to doing all in its power to make its Safety Program and Safety Committee a success, and expects all city employees to assist in this effort by contributing expertise and by following all established rules and procedures

The City of Willmar recognizes its obligation to provide the safest possible working conditions for its employees, a safe environment for its citizens, and in the event of an accident, to provide prompt first aid and medical care to minimize personal injuries. This requires a safety program whereby: (1) our employees will be provided proper personal protective equipment and job instruction; (2) their work practices will be frequently reviewed; and (3) most important, their work performance will be evaluated.

The safety program will provide for the establishment of job safety training, minimum job safety requirements, and investigation and reporting of accidents. Each Supervisor must implement and aggressively support our safety program. All Supervisors and Department Heads will be responsible for the actions of their employees. All employees will be expected to help and support the efforts of the Safety Coordinator, to follow safe practices, and to obey all of the safety rules. We all must make every effort to reduce the burden of accidents and injuries.

Signed this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_

Signed: \_\_\_\_\_ Title: \_\_\_\_\_

NOTE: Signed copy available to employees upon request through the Safety Coordinator

# GENERAL RESPONSIBILITIES AND AUTHORITIES

## City Administrator

The Administrator has the responsibility to monitor the safety program implementation, to periodically report the status and adequacy of the safety program to the city council, to maintain policy manual, to maintain the safety program records, and for the establishment of the position of Safety Coordinator.

## Safety Coordinator

The Safety Coordinator has the appropriate level of authority to implement the program, and reports directly to the Administrator on safety matters. The Safety Coordinator's position includes, but is not limited to:

- Professional development, including maintaining a reference library, receiving publications, and membership in professional organizations
- Development and administration of incident-prevention and loss control methods, procedures, and programs
- Coordinate training and communications for Supervisors, Department Heads, and employees
- Be an internal consultant to identify and appraise incident- and loss-producing conditions and practices and evaluation of the severity of the incident problem
- Communicate incident and loss control information to those directly involved
- Provide information for management to include accident recording-keeping, and program activities
- Measure and evaluate the effectiveness of the incident and loss control system and the modifications needed to achieve optimum results
- Maintenance of the safety program documentation
- Have access to the [OSHA](#) Safety Standards. Shall have a complete copy of the safety program available and be thoroughly familiar with it so that they understand their own responsibilities and the responsibilities of the employees reporting to them
- Review the city safety program, at a minimum, annually, and make amendments or additions as needed

## Department Heads/Supervisors

- Ensure employees are aware of their specific duties and responsibilities, have access to the Safety Program Policy and all of the department specific safety rules and training requirements
- Should review accident summary reports in order to keep informed of the job accident record and insist on appropriate action when trends are unfavorable
- Should investigate accidents personally to ensure that causes have been identified and proper corrective action taken
- Should determine that tools and equipment are in first class condition. Any tool or equipment that is defective or unsafe shall be removed from the working area and tagged, disabled or discarded
- When new operations or materials are introduced, Supervisors and Department Heads should be satisfied that the necessary safety precautions have been exercised
- Should monitor the written safety program documentation to ensure they are being fully and correctly completed
- Should instruct employees of the safety program administrative procedures to be followed, the safe conditions that are to be maintained throughout and instruct workers in proper and safe practices
- Should make available necessary personal protective equipment, job safety materials, and first-aid materials

## Employees

The city expects each individual employee to cooperate in every respect with the safety program so that the operations may be carried on in such manner as to ensure the safety of all employees. The employee's responsibility is to be consistent with [OSHA](#) regulations, city-wide safety rules, department safety rules and specific job training and includes (but is not limited to):

- Work according to good safety practices as posted, instructed and discussed
- Refrain from any unsafe act that might endanger themselves or fellow workers
- Use all safety devices provided and required for their protection and the protection of others
- Report any unsafe condition or act to their Supervisor or Department Head immediately
- Assume their share of responsibility for thoughtless or deliberate acts that cause injury to themselves or fellow workers
- Report all injuries to his/her Supervisor or Department Head
- Maintain a clean and safe work area

## **COMMUNICATIONS AND SAFETY TRAINING**

It is the policy of the City of Willmar to train all employees in their individual safety responsibilities and to give employees an avenue to express concerns they may encounter in the workplace.

Training and Instruction of employees is a form of hazard control. The AWAIR Act specifically requires that the accident reduction plan will be communicated to all affected employees so that they are informed of work-related hazards and controls. The City Of Willmar is committed to that process.

### **General Training**

- New employees are to be informed of their safety program responsibilities. This training is to take place during orientation to the city and is to be documented. Additional employee orientation and specific job training shall take place at the department level prior to the employee starting work or on-line as required.
- The Supervisor or Department Head is to provide training in the use of personal protective equipment and safe practices at the department level on an "as-needed basis." This training is to include, but is not limited to, training on general department safety rules, training on the appropriate equipment the employee may be using, and training on the work activities the employee may be involved in.
- Periodic safety training is to be provided in the safety meetings and other formal meetings, or correspondence as deemed appropriate by the department. The department head or supervisor is to ensure that each individual employee is suitably instructed and knowledgeable in the use of equipment and personal protective equipment. Training will be according to general and specific department policies/procedures.
- As determined by the department head, special safety training seminars presented by safety professionals will be presented to selected/affected employees.
- Copies of suitable safety information including the specific department safety policies/procedures are available to employees.
- Employees are encouraged to submit pertinent safety recommendations through their department safety committee representative and/or Supervisor/Department Head.
- Department Safety Meetings:
  - The appropriate Supervisor or Department Head will conduct safety meetings with the department employees at the time and place as determined by the department.

- The purpose of these meetings is to include the following:
  - General promotion of accident prevention efforts on a continuing basis
  - Review of past accidents and any outstanding safety recommendations
  - Discussion of safety inspections performed since the previous meeting
  - Evaluation of Supervisor or Department Head's weekly safety meeting including suggestions and requests
  - Reading of city safety committee minutes
- A selected safety subject may be presented in an effort to broaden the group's knowledge and stimulate continued, active regard for accident prevention.
- Upon request, the City Safety Coordinator will provide the materials on selected topics for the meeting.
- Meeting documentation is to be kept within each department, and a copy forwarded to the Safety Coordinator and safety committee.

**Additional forms of training may include**

- Written handouts
- One-on-one
- On the Job Training (OJT) – hands-on
- Group (see safety training schedule)
- School or outside Training
- Area Seminars/Outside Contractors

## **PERSONAL PROTECTIVE EQUIPMENT PROGRAM**

### **GENERAL**

Personal protective equipment (PPE) includes all clothing and other work accessories designed to create a barrier against workplace hazards. PPE should not be used as a substitute for engineering, work practice, and/or administrative controls. Personal protective equipment should be used in conjunction with these controls to provide for employee safety and health in the work place.

**(POSTERS DESIGNATING REQUIRED PPE ARE LOCATED IN DESIGNATED AREAS)**

### **GENERAL PERSONAL PROTECTIVE EQUIPMENT GUIDELINES**

- A worker sometimes must wear one piece of PPE in combination with another piece. In such cases, both pieces of PPE should fit well and one piece of PPE should not interfere with the effectiveness of the other. For instance, if a worker must wear a hard hat while wearing a dust mask, both should fit well and remain effective.
- All designated employees must wear required PPE any time they are in an area, or doing work requiring such PPE (see PPE poster in your work area). Employees must be aware that the equipment does not eliminate the hazard. If the equipment fails, exposure will occur.
- PPE must be kept sanitary and in good condition. Personal protective equipment that has been previously used should be disinfected before being issued to another employee.
- Employees are responsible for cleaning PPE as necessary and for inspecting PPE before each use. When an employee is assigned protective equipment for extended periods, it must be cleaned and disinfected regularly.
- PPE shared between employees must be properly cleaned and sanitized before and after use.
- When contaminated PPE cannot be decontaminated, it must be discarded in a manner that protects employees from harmful exposure and that complies with environmental regulations.
- Manufacturers should be consulted with regard to inspection and maintenance requirements. PPE should be repaired with quality parts. Manufacturers' recommendations and published standards should be strictly implemented.





# Personal Protective Equipment Checklist



JOB/OPERATION	PERSONAL PROTECTIVE EQUIPMENT REQUIRED	Legend	JOB/OPERATION	PERSONAL PROTECTIVE EQUIPMENT REQUIRED
Vehicular Traffic Exposure		GLOVES	Operation of Welder & Gas Torches	
Working Where Employee May Bump or Be Struck by Falling Object		NEOPRENE GLOVES	Earthmoving Equip. Exposure	
Use of Power Washes (Water)		SEAT BELTS	Use of Spray Chemicals (Penetrating Oil, Carb Cleaner) - See MSDS	
Work with High Exposure to Hand Cuts, Bruises or Abrasions		HARD HAT	Use of Jacks & Hoist/Chain	
Where Decibels Exceed 85		SAFETY GLASSES	Use of Parts Washer	
When Chemicals are Used/Mixed (Check Label & MSDS)		EAR PROTECTION	Jobs Where Dirt, Grease, or Metal May be Propelled Towards Eyes	
Use of Herbicides/Pesticides		O2 TESTER	Flag Person	
Operation of Vactor		TRI-POD	Use of Chain Saws	
Operation of City Equipment/Vehicles		RUBBER BOOTS	Inspection of Building Sites	
Hand Tools (Impact, Air Wrench, etc.) Used With Air Compressor		NEOPRENE BOOTS	Working in a Confined Space Area, i.e. Manholes, Tanks, etc.	
Use of Power Saws/Tools		FACE SHIELDS/SCREENS	Post-Pounder Use	
Operation of Chipper		SAFETY VESTS	Operate Walk Behind Mower	
Excavation/Trenching		SAFETY BELT/HARNESS	Crack Repair	
Operation of Jack Hammers		JACK STANDS	Operate Riding Mower	
Asphalt/Black Top-Street Repair		TINTED GOGGLES/HELMET	Operating Weed Whip	
Operate Walk-Behind Snow Blower		LEATHER GLOVES	Trimming Trees & Bushes	
Arial Truck Use		PROTECTIVE FOOTWEAR	Handling Chemicals Added to Water	
Utility Knife Use		CHAPS	Milling Machine	
Operation of Grinder		PROTECTIVE SUIT	Tack Machine	
Use of Chisel		Protective goggles	Working with Asphalt	
General Street Maintenance		WELDING APRON	Off-Road Equipment Operation	

# FIRST AID

## GENERAL

An effective first aid program helps protect the health of employees by providing early care for injuries. It also provides valuable information for the analysis of losses, so safety programs can be continually improved.

- Report all accidents/incidents requiring first aid to your Supervisor or Department Head.
- All employees will dial 9-1-1 in the event of a serious injury to another employee.
- Persons should not attempt to give first aid for which they have not been trained.
- The Bloodborne Pathogens Standard covers employees, who are designated or choose to provide first aid.
- Designated First aid personnel are eligible to receive appropriate vaccinations, i.e. Hepatitis A and B. Although many employees are trained in first aid and/or CPR, only employees in the Law Enforcement and EMS departments are considered “designated” first aid employees. All other employees should seriously consider all medical risks before providing first aid. An immediate 911 call should be your priority.
- First aid kits are located in each building. Ask your Supervisor for locations.
- Eyewash stations are located in areas where chemicals are used, or transferred. If chemicals are in your eyes:
  - Push or pull handle to activate
  - Hold eyelids open
  - Flush continuous for at least 15 minutes
  - Call the phone number on the container (if non serious)
  - Call 911 is serious or unsure of the damage

## JOB HAZARD ANALYSIS

Job Hazard Analysis (JHA) is a technique for reviewing needs for machine guarding, energy lockout, ergonomics, material handling, Bloodborne Pathogens, Confined Space Entry, Right-to-Know, and other generally applicable standards.

- **Job Hazard Analysis have been developed based on**
  - **Frequency of Accidents** A job that has repeatedly caused accidents is a candidate for JHA. The greater the number of accidents associated with the job, the greater its JHA priority.
  - **Rate of Disabling Injuries** Every job that has disabling injuries should be given priority for JHAs.
  - **Severity Potential** Some jobs may not have a history of accidents but may have the potential for a severe injury.
  - **New Jobs** A JHA of new jobs should be made as soon as possible. Analysis should not be delayed until accidents or near misses occur.
  - **Near Misses** Jobs where near misses or close calls have occurred also should be given priority.

Ask your direct Supervisor to review the JHAs directly pertaining to your job.

## ENFORCEMENT

It is expected that all employees will comply with all safety standards, statutes, and policies on which they have received training. However, if an employee willfully or negligently violates any portion of the safety program, he or she will be subject to progressive discipline as required under organizational policy. Management reserves the right to deviate from the disciplinary policy if the seriousness of the offense warrants a higher degree of discipline



# EMPLOYEE RIGHT TO KNOW

The City Of Willmar has committed to comply with the intent and spirit of the Hazard Communication Standard outlined in [29 CFR 1910.1200](#), Employee Right To Know-[5206.0100 thru 5206.1200](#), and the Globally Harmonized System (GHS) of classification and labeling chemicals. Our program is designed to educate and inform all employees of the hazardous chemicals within our facilities.

## SAFETY DATA SHEETS

Safety Data Sheets (SDS) are documents that provide us with specific information on the hazardous substance for which they are written. These documents are typically shipped by the supplier, manufacturer, or importer with the initial order, or the first order after any change in the product, of any substance and/or chemical known to pose a health hazard to employees who are exposed or potentially exposed to them. A SDS may be requested through any of the below methods.

- the suppliers web site (on container/or web search)
- Call the supplier direct (on container)
- Write to the supplier's physical address. (on container/or web search)

NOTE: Material Safety Data Sheets (MSDS) may be used as an informational substitute until a updated Safety Data Sheet (SDS) is sent by the manufacturer, located online, or gathered through the city online database.

## ONLINE SDS MANAGEMENT SYSTEM

The SafeAssure/SDS services to our employees include:

- National Poison Control Hotline: 1-800-222-1222 (24 hrs. a day/365 days yr.)
- Our complete SDS data base
- SDS available online at <http://www.msdsdsonline.com> (24 hrs. a day/365 day's yr.)

**USER NAME:** cwempl

**PASSWORD:** msds










- Automatic updating of all SDS/MSDS
- Internal backup reminders/support
- Archive old/unused SDSMSDS
- Handout instructions (see end of this section)
- Support/Link to helpful videos: <http://help.msdsdsonline.com/video-library#VideoLibrary>

## LABELS AND OTHER FORMS OF WARNING

Manufacturers/Venders Labels on containers shipped from the manufacturer must include the following elements:

- **Pictogram:** a symbol plus other graphic elements, such as a border, background pattern, or color that is intended to convey specific information about the hazards of a chemical. Each pictogram consists of a different symbol on a white background within a red square frame set on a point (i.e. a red diamond). There are nine pictograms under the GHS. However, only eight pictograms are required under the HCS.
- **Signal words:** a single word used to indicate the relative level of severity of hazard and alert the reader to a potential hazard on the label. The signal words used are "danger" and "warning." "Danger" is used for the more severe hazards, while "warning" is used for less severe hazards.
- **Hazard Statement:** a statement assigned to a hazard class and category that describes the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard.
- **Precautionary Statement:** a phrase that describes recommended measures to be taken to minimize or prevent adverse effects resulting from exposure to a hazardous chemical, or improper storage or handling of a hazardous chemical.

### Pictograms and Hazards

<b>Health Hazard</b> 	<b>Flame</b> 	<b>Exclamation Mark</b> 
<ul style="list-style-type: none"> <li>• Carcinogen</li> <li>• Mutagenicity</li> <li>• Reproductive Toxicity</li> <li>• Respiratory Sensitizer</li> <li>• Target Organ Toxicity</li> <li>• Aspiration Toxicity</li> </ul>	<ul style="list-style-type: none"> <li>• Flammables</li> <li>• Pyrophorics</li> <li>• Self-Heating</li> <li>• Emits Flammable Gas</li> <li>• Self-Reactives</li> <li>• Organic Peroxides</li> </ul>	<ul style="list-style-type: none"> <li>• Irritant (skin and eye)</li> <li>• Skin Sensitizer</li> <li>• Acute Toxicity (harmful)</li> <li>• Narcotic Effects</li> <li>• Respiratory Tract Irritant</li> <li>• Hazardous to Ozone Layer (Non Mandatory)</li> </ul>
<b>Gas Cylinder</b> 	<b>Corrosion</b> 	<b>Exploding Bomb</b> 
<ul style="list-style-type: none"> <li>• Gases under Pressure</li> </ul>	<ul style="list-style-type: none"> <li>• Skin Corrosion/ burns</li> <li>• Eye Damage</li> <li>• Corrosive to Metals</li> </ul>	<ul style="list-style-type: none"> <li>• Explosives</li> <li>• Self-Reactives</li> <li>• Organic Peroxides</li> </ul>
<b>Flame over Circle</b> 	<b>Environment (Non Mandatory)</b> 	<b>Skull and Crossbones</b> 
<ul style="list-style-type: none"> <li>• Oxidizers</li> </ul>	<ul style="list-style-type: none"> <li>• Aquatic Toxicity</li> </ul>	<ul style="list-style-type: none"> <li>• Acute Toxicity (fatal or toxic)</li> </ul>

#### SAMPLE GHS SHIPPING LABEL

**PRODUCT IDENTIFIER**

Universal Product Code


**SIGNAL WORD** 1

Hazard statement 3

Precautionary statements & pictograms 4

Fill Weight:      Lot Number:  
Gross Weight:      Fill Date:  
Expiration Date:

5 Company Name, Street Address, City, State, Zip, Country, Phone Number, Emergency Phone



## INTERNAL LABELING REQUIREMENTS

A completed label must contain, at a minimum, the following information:

- Chemical/Product Name
- Hazard Warnings
- Chemical Manufacturer/Address (recommended)

All employees are responsible to ensure that all hazardous materials in the work place have the proper, completed labels visibly attached. If non-English employees are hired, labels must also be completed in the language of that employee. All employees have these labels available to them when required.

Shipping & receiving personnel are responsible to ensure all incoming hazardous materials (bulk) have the proper labels affixed (see sample GHS label on previous page). Labels that are illegible, defaced or in any other way unreadable will be replaced. Containers must be stored in such a manner that the label is always visible.

Chemicals transferred from a labeled container to a portable container require that the portable container also be labeled unless the portable container is for **immediate use**. Immediate use containers, described below, need not be labeled.

**IMMEDIATE USE CONTAINER**: Means a container into which substances are transferred from labeled containers, and which will be under the control of, and used only by the person who transfers it from a labeled container, and only within the work shift in which it is transferred. This applies to containers such as plastic bottles, drums, vials, pitchers, pails, or similar containers, which are routinely used and reused. Do not assume all containers not labeled are for “immediate use”.

# EMERGENCY ACTION PLAN

This Emergency Action Plan has been prepared to assist you with the preparation of a workable emergency plan.

It is imperative that all employees and any visitors to your facility are protected in case of an emergency and that the health and care of all individuals are prime considerations. Continuing and meaningful efforts to prevent incidents that lead to emergency situations should be the area of greatest concern. This program was developed in accordance to [29 CFR 1910.38](#)

Although there are detailed procedures for all incidents in your safety manual, you will either be told to evacuate or go to your shelter immediately. Below are the basic guidelines for both.

## EVACUATION

When evacuation is ordered by the Department Head, or person in charge, the Fire Evacuation routes will be used. The Department Head, or person in charge, will make the decision whether to evacuate all or relevant parts of the office area based upon information available and the advice of the local law enforcement authorities. Search the areas which people will use to evacuate the building. Once this is accomplished, the building can be evacuated. An option not to evacuate may be made when "sound judgment" and experience indicates there is no real threat.

## REPORT TO SHELTER

Once a tornado announcement has been received:

- Secure your work area (close doors, windows, etc.).
- Report to the designated shelter area. If time permits, bring a portable radio, first aid kit, flashlight and fire extinguisher with you to your shelter area.
- Employees will gather inside at their assigned designated location

Building	Fire Safety Field/Bomb Threat	Storm Shelter
City Office Bldg.	South Door of Presbyterian Church	Basement Floor at Base of Steps
PD/LEC	Front Parking Lot Near the Street Entrance	EOC
Community Center	Summer: Shed by Garden Winter: Poultry Lab Next Door	Bathrooms
Civic Center	Parking Lot in Front of Main Entrance	Hallway to Locker Rooms 1-4
WWTP	New: East Gate Old: Front Gate	Locker Rooms for both Old and New
Airport	South Parking Lot	Bathrooms
Public Works	Public Works Mailbox Industrial Drive SW	Public Works Mechanics Parts Room
Fire Hall	Across Street-Family Practice Parking Lot	Lower Level Restroom/Locker Room

# BLOODBORNE PATHOGENS

The City of Willmar Bloodborne Pathogens Policy (Exposure Control Plan) was developed to ensure our staff is informed of the potential occupational exposure to Bloodborne pathogens in and outside our facilities and to eliminate or minimize occupational exposure to Bloodborne pathogens in accordance with the [OSHA 29 CFR 1910.1030](#) regulations. This program covers all affected employees with the exception of the Police and Fire Departments who have separate programs to ensure their specific compliance requirements.

## EXPOSURE CONTROL PLAN

Our employees will be trained in the ECP at the time of hire as well as annually. Employees concerned about Bloodborne pathogen exposures or the exposure control plan are encouraged to contact the Safety Coordinator.

### Employee Exposure

Employee exposure to potentially infectious material is divided into two categories, direct and indirect.

- **Direct exposure** risks are limited to actions related to the care of injured personnel when providing First Aid and/or CPR. This type of care is classified by the standards as "Good Samaritan" acts and would not constitute as a professional health care provider. Any contact with the blood or other bodily fluid of another would also constitute a direct exposure.
- **Indirect exposure** risks are limited to work that requires contact with raw untreated sewage through valve maintenance/repair and general Confined Space entry. Current research (MN department of Health) indicates the greatest risk of exposure with indirect exposure is oral ingestion. The risk of exposure, for example, for a person working in infectious raw sewage with an open cut is considered minimal due to the high amount of dilution and variations within the environment.

## UNIVERSAL PRECAUTIONS

All employees will use universal precautions, which require employees to ***assume that all human blood or body fluids are infectious for HIV, HBV and other pathogens.*** The following precautions are to be utilized to reduce exposures.

### HAND WASHING

Hand washing is indicated for prevention of cross transmission of infectious agents, allowing protection of the injured and the responder. Hand washing is indicated in situations including:

- Immediately after unanticipated contact with blood, body fluids or sewage
- Immediately after gloves are removed
- Immediately after contact with raw sewage
- For personal hygiene, i.e., arrival or returning to the work site, use of the lavatory, before eating, etc. When hand-washing facilities are not available, waterless, antiseptic hand cleanser is available and must be used.

## SHARPS SAFETY

**Defined as: Needles and other sharp objects that can penetrate skin.**

Staff is asked to have all injectable medications administered prior to arrival or practice self-administration during the working shift.

Safe use **must** include:

- Disposal in a puncture-resistant container immediately after use
- No routine recapping of needles

**Exception**--where no alternative exists, one-handed or device assisted recapping

The discarding of contaminated needles from the public is a major concern. Employees must take additional care when handling garbage and receptacles to reduce the possibilities of needle sticks.

When handling garbage:

- Keep bag away from body when handling (mechanical handling when possible)
- Do not gather garbage with your hands (use mechanical devices when possible)
- Wear puncture resistant gloves (leather)

## PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment must also be utilized if occupational exposure remains after instituting engineering and work practice controls. All control measures shall be reviewed during our annual review of the complete program. Effective personal protective equipment will not allow blood or other potentially infectious materials to pass through mucous membranes.

- First Aid responders including all on and off site employees will have quick access to kits containing gloves, ventilation devices, pocket masks, eye protection and hand washing facilities.
- Appropriate PPE will be worn whenever contact with blood or body fluids is anticipated. All PPE will be provided at no cost to the employee.

### PPE Available:

- **Gloves:** *Use of gloves is suggested for workers before:*
  - "Reasonably anticipated" contact with blood or body fluids, patient's mucous membranes
  - Patient's non-intact skin
  - Handling or touching of contaminated items or surfaces
  - If the worker has non-intact skin (e.g., cut, scratches, rashes)
  - Contact with equipment or surfaces that are soiled with blood or body fluids
  - If contact with raw sewage is anticipated
- **Clothing:** *Use of overcoats or removable clothing is indicated in situations such including:*
  - "Reasonably anticipated" contact with: blood or bodily fluids
- **Face shields/masks and eye protection:** *Use of is suggested when:*
  - "Reasonably anticipated" contact with: splashing or spattering of blood or bodily fluids
- **Mouthpieces, pocket masks or other ventilation devices.** *Safe practices must include:*
  - No unprotected mouth-to-mouth resuscitation
  - No mouth pipetting/suctioning of blood or body fluids

**Note: All of the above is available to all personnel that have exposure possibilities.**

### General Rules for employees using PPE:

- Wash thoroughly immediately after removal of any PPE.
- Remove protective equipment before leaving the work area.
- Place used protective equipment in appropriately designated areas or containers when being decontaminated, or discarded.
- Wear appropriate PPE when it can be reasonably anticipated that you may have contact with blood or other potentially infectious materials and when handling or touching contaminated items or surfaces. Replace any article of PPE if torn, punctured, contaminated, or if their ability to function as a barrier is compromised.



- Following contact of body areas with blood or any other infectious materials, you must wash your hands and any other exposed skin with soap and water as soon as possible. Employees must also flush exposed mucous membranes (eyes, mouth, etc.) with water.
- Never wash or decontaminate disposable PPE for reuse.
- Wear appropriate face and eye protection such as a mask with glasses when spatters or droplets of blood or other potentially infectious materials pose a hazard to the eye, nose or mouth.
- If blood and/or other potentially infectious materials penetrate a garment, the garment(s) must be removed immediately or as soon as feasible.

## HOUSEKEEPING

The Safety Coordinator has developed and implemented a procedure for cleaning and decontaminating work surfaces and equipment contaminated with potentially infectious materials.

- Work sites shall be maintained in a clean and sanitary condition.
- Work surfaces (ex. desks, floors, etc); equipment, material and items that come in contact with potentially infectious material shall be cleaned and sanitized. A solution of sodium hypochlorite (household bleach) mixed at ¼ cup bleach to one gallon of water is considered adequate to disinfect contaminated materials. Chlorinated wipes are also available and can be used.
- Contaminated items will be handled in a safe manner minimizing further contamination or exposure. Always use mechanical means such as tongs, or a brush and dustpan to pick up contaminated broken glassware; never pick up with hands even if gloves are worn.
- Discard all regulated waste through the hospital infectious control coordinator. Liquid or semi-liquid blood or other potentially infectious material; items contaminated with blood or other potentially infectious materials that would release these substances in a liquid or semi-liquid state if compressed; items caked with dried blood or other potentially infectious materials and capable of releasing these materials during handling will require storage in a labeled and sealed biohazard container. This normally does not include band-aids.

***Note: If the Emergency medical System (EMS) is notified and arrives, ask if they may remove all regulated waste for you. They are better equipped to handle biohazards.***

## POST EXPOSURE EVALUATION

Should an exposure incident occur, contact the Safety Coordinator and direct Supervisor immediately. Each exposure must be documented by the employer/employee on an Exposure Report Form. In addition, a review of the circumstances related to the exposure incident would be conducted to determine if procedures, protocols and/or training need to be revised. A licensed physician through our local clinic will conduct a confidential medical evaluation and follow up. The following items will be addressed:

- Document the routes of exposure and how exposure occurred.
- Identify and document the source individual unless the employer can establish that identification is infeasible.
- Obtain consent and test source individual's blood as soon as possible to determine HIV and HBV infectivity and document the sources' blood test results.
- If the source individual is known to be infected with either HIV or HBV, testing need not be repeated to determine the known infectivity.
- Provide the exposed employee with the source individual's test results and information about applicable disclosure laws and regulations concerning the source identity and infectious status.
- After obtaining consent, collect exposed employee's blood as soon as feasible after the exposure incident and test blood for HBV and HIV serological status. If the employee does not give consent for HIV serological testing during the collection of blood for baseline testing, preserve the baseline blood sample for at least 90 days.

- The employee must be offered post exposure prophylaxis in accordance with the current recommendations of the U.S. Public Health Services.
- The employee must be given appropriate counseling concerning precautions to take during the period after the exposure incident. The employee must also be given information on what potential illnesses to be alert for and to report any related experiences to appropriate personnel.

## HEPATITIS B VACCINATION

The City of Willmar will provide information on Hepatitis B vaccinations addressing its safety, benefits, and effectiveness methods of administration and availability. With the exception of law enforcement and EMS personnel, job tasks associated with employees of the City of Willmar do not constitute a reasonably anticipated direct occupational exposure to infectious materials, Hepatitis B vaccinations will be available and administered at the request of the employee or upon review by a licensed physician **(see form available through your direct Supervisor)**.

The Hepatitis B vaccination series will be made available at no cost within ten days of; the request for vaccination, determination of an exposure incident, or the initial assignment of duties where an employee can reasonably anticipate occupational exposure to blood or other potentially infectious materials.

### **Exceptions may include:**

- the employee has previously received the series
- antibody testing reveals that the employee is immune
- medical reasons prevent taking the vaccination; or
- the employee chooses not to participate

If an employee chooses to decline HB vaccination, the employee must sign a statement to this effect **(see form available through your direct Supervisor)**. Employees who decline may request and obtain the vaccination at a later date at no cost. Documentation of refusal of the HB vaccination will be kept in the office with the employee's other medical records. There is currently no booster recommended for the HB vaccine, but should one be developed this would also be offered at no charge to the employee under the provisions of this standard. The Hepatitis B vaccine is **NOT** a live-virus vaccine; therefore Hepatitis B **cannot** be contracted from the vaccine.

**NOTE:** Law Enforcement and Fire Department employees are considered at risk employees and are provided HBV vaccinations upon employment.

# PROPER LIFTING

Lifting, carrying, and lowering are power jobs -- when you lift and carry the wrong way, you can damage your back. Each worker should know the proper method of lifting heavy objects.

## Lifting the load

- To lift a load shoulder high or above your head first lift it waist high, rest it on a support and change your grip. Then bend your knees to get added power for the big push.
- Drums or barrels should be rolled with your hands against the sides. Grasping the ends with your hands can mean crushed fingers - using your feet can mean crushed toes.
- Use slow and smooth movements. Hurried, jerky movements can strain the muscles in your back.
- Keep your body facing the object while you lift it. Twisting while lifting can hurt your back.
- Keep the load close to your body. Having to reach out to lift and carry an object may hurt your back.
- "Lifting with your legs" should only be done when you can straddle the load. To lift with your legs, bend your knees to pick up the load, not your back. Keep your back straight.
- Be sure you have a tight grip on the object before you lift it.
- Plant your feet firmly well apart and squat down.
- Watch for sharp edges - Get a good grip before lifting.
- Keep your back straight - Lift slowly (don't jerk) by pushing up with your legs.
- Don't twist your body with the load - Shift your feet.
- Wear gloves when handling rough equipment or material
- Be sure of a good grip and good footing
- Keep the load close to the body
- See that your fingers and toes are in the clear
- Bend your knees and use your leg muscles
- Don't twist your body while lifting
- Stand Close to the Load
- Bring the Load Close to your Body
- Lift Head and Shoulders First, and With Your Back Straight, Use the Strength of Your Legs to Slowly and Smoothly Push Up
- Make Sure That You Can See Over the Load
- Footing is as important in lifting as it is in the batter's box. Feet close to the object; far enough apart for good balance (about shoulder-width apart). One foot slightly ahead of the other seems best for many.
- Bend knees, go down to a crouch, but not a full squat. It takes double the effort to straighten up a full squat as it does from a crouch. Keep back as straight as possible; don't arch it.
- Get a good, firm grip; no lifting until your hold is strong and slip-proof.
- Lift object by straightening your legs, keeping load close to you as you come up.

## Lowering/Setting down the load

- Set it down the way you picked it up - by bending your knees, with your back straight up and down, but don't set it on your hands, Put down one corner of the load first and then slide your hands away.
- Bend Your Knees to Lower the Load
- Keep Your Fingers from Under the Load
- Lower Slowly and Smoothly
- In setting load down, go down with back straight knees bent, to a crouch.

# OPERATING CITY VEHICLES

The driver is responsible for checking the safety and general condition of the vehicle, including gas, oil, and other fluid levels, lights, and brakes. With the assistance of the Safety Coordinator, Supervisors and Department Heads will furnish vehicles with inspection checklists (**see form available through your direct Supervisor**). If there is something wrong with the vehicle which may affect safety, repairs will be made before use.

## **Vehicle Abuse**

No employee will use a vehicle or equipment for any purpose for which it was not designed, operate it beyond its designed limits, and operate in areas or locations for which it was not designed, or cause damage through neglect, misuse, improper driving techniques, or improper handling.

## **Transporting Employees in City Vehicles**

No more than three employees will ride in the front seat or cab of a vehicle. Each position will be equipped with a seat belt, and each person will use the seat belt provided. No employee will be authorized to ride or work from the bed or rear of a vehicle while it is in motion.

## **Traffic Laws**

Employees will adhere to all traffic laws and regulations when operating city vehicles. An employee will at all times operate city vehicles in such a manner as to avoid injury to persons or damage to property.

## **Unauthorized Use of Vehicles**

Unless specific permission is given by a Supervisor, city vehicles are to be used for city business only.

Persons found using city vehicles (without permission) for their personal errands may be subject to disciplinary action.

## **Operation and Occupancy of Entity Vehicle by Unauthorized Persons**

Employees will not permit unauthorized employees or non-employees to ride in city vehicles, except when such persons are conveyed in the performance of duty, or authorized to ride by Supervisory staff.

## **Parking Vehicles**

All employees will park their vehicles in a legal and proper manner (if required for road maintenance-consult the MUTCD). Employees will remove the keys and lock the vehicles, except when specifically instructed otherwise. Employees will not park on the wrong side of a street or highway, unless it is mandatory to park in such a location to perform a job.

All signs, cones, lights, and warning devices as required by law will be used when vehicles are parked or in use in a public travel lane (consult MUTCD). Employees will use all safety brakes, lockout devices, and other parking safety methods when parking equipment.

## **Use of Personal Vehicles for City Business**

Supervisors and Department Heads will identify and authorize those employees who are required, as part of their normal job duties to use their personal vehicle to conduct city business. The employee's own insurance policy is the primary coverage and, therefore, the City of Willmar will not be responsible for any claims that arise out of any motor vehicle accident that the employee is involved while operating their personal vehicle.

## **Transporting Equipment**

Employees using city vehicles will exercise caution when transporting equipment, packages or other materials in the driver/passenger compartment that would become flying projectiles in the event of an accident. Such items as briefcases, laptop computers, tools, etc. need to be transported in the trunk of passenger vehicles. Pickups, whether standard cab or extended, should have secured storage capabilities in the bed of the vehicle such as tool storage if they are used with any regularity in the transport of items that could injure the driver or passenger(s) in the event of an accident. It is always important to keep the driver/passenger as free as possible of objects that could distract their attention or could cause from unexpected movement.

## **BREAKDOWNS**

Driver's responsibilities when a breakdown happens include:

- Safely stopping and securing the vehicle and load
- Safely placing the warning devices
- Diagnosing and calling in the breakdown to his/her Supervisor

Supervisor or Department Head responsibilities when a breakdown occurs include:

- Determining the nature of the breakdown and best course of action
- Locating, contacting, and dispatching maintenance personnel or a vendor to facilitate repairs

# LOCKOUT/TAGOUT (ENERGY CONTROL)

It is the policy of the City of Willmar to control hazardous energy by meeting or exceeding the requirements of [29 CFR 1910.147](#), as such; this policy and the corresponding lockout/tagout procedures will become an intricate part of our safety program.

An **authorized** employee will completely lock or tag out equipment, machines/equipment or powered tools when:

- Setting up
- Assembling or disassembling
- Servicing, performing maintenance or,
- The unexpected energizing or start up of the machine/equipment or the time release of stored energy could cause injury

**NOTE: The Public Works, Wastewater Departments and Building Maintenance employees are the only employees authorized to perform Lockout/Tagout within our city properties.**

An **authorized** employee will lock or tag out all sources of energy to the equipment or machine, including, but not limited to:

- Electrical
- Hydraulic
- Pneumatic
- Chemical
- Mechanical
- Thermal
- Gravity
- Other

An **authorized** employee will dissipate any and all stored or residual energy affecting their task such as that found in capacitors, springs, flywheels, hydraulic and air systems, gravity, etc.

An **authorized** employee will strictly follow the specific de-energizing procedures.

**NOTE: Although individual locks are issued, our main Lockout Stations are currently located in the maintenance shops.**

## LOCKOUT/TAGOUT PROCEDURES

Procedures for de-energizing and re-energizing each machine must be followed exactly in the order that they are written. All procedures will be reviewed/re-approved annually.

- Before working on equipment/machine authorized employees and their Supervisor or Department Head must evaluate the authorized employee's skill level to include:
  - Knowledge of specific equipments mechanics
  - Knowledge of known energy sources within the specific equipment/machine
  - Knowledge of possible unknown energy sources created by work done within the specific equipment/machine
  - A review of specific Lockout procedures for that equipment/machine

The city specific procedures are in a separate lockout manual located in areas of specific lockout applicable equipment. The lockout procedures form will be used to develop additional specific procedures.



# CONFINED SPACE

The City of Willmar is committed to complying with both the spirit and intent of the Confined Space Standard as outlined in [29 CFR 1910.146](#) as it pertains to contractual work for our customers.

It is imperative that all employees strictly adhere to the procedures as outlined in this Section. These procedures are designed to protect entrants, attendants and rescue personnel from the hazards associated with confined space entry.

## TESTING

Testing the space before entering is an intricate part of Confined Space Entry. If the space is not monitored or the monitor is not functional or available, the hazards are unknown. Thus, we unknowingly put employees at risk. The following are the critical components of an effective testing system that must be followed:

### Calibrating/Use

The monitor must be gas calibrated according to manufacturers recommendations to assure accuracy (**see form available through your direct Supervisor**). It is very important that detectors are calibrated to assure an accurate/reliable tester is used before every entry. In addition, the following must also be done before monitoring can be done:

- **Ensure worker has satisfactory knowledge and training of monitor and its functions before operation.**
- **Inspect instrument sticker indicating last calibration and gasses calibrated along with the initials of the tester. If this has not been done within the manufactures recommendations, make arrangements to use another monitor for pre-entry.**
- **To ensure an accurate reading within a space, ensure the extension tube (if used) is long enough to reach, at a minimum, twelve inches from the bottom or end of the deepest space you may enter.**
- **“Fresh Air” calibration. This can only be done in open/fresh air away from space to assure instrument readiness/proper calibration. Our monitor automatically conducts a “fresh air” calibration when turned on.**

### Pre-entry/testing

First, initial testing of the confined space **before each entry** must be done and recorded on a permit if applicable.

For accurate hazard analysis, the Entry Supervisor must do the following initial monitoring and be made available to all entrants through the permit form (**see form available through your direct Supervisor**).

*Ensure the following is done (in order):*

- **Ensure permit is completed if applicable (see form available through your direct Supervisor for “permit required” spaces)**
- **Remove cover/lid/door immediately and wait a minimum of one minute**
- **Mechanically ventilate space**
- **Attach hose when applicable (ensure it will reach within 12” of bottom/end)**
- **Ensure monitor is still operational**
- **Insert hose to within 12” of bottom/end or lower whole monitor slowly within 12” of the bottom**
- **Pull monitor up slowly (push peak button) and record readings**
- **Secure monitor**

- **Bring monitor up (if lowered).** If the hose used and lowered, wait a minimum of two minutes for accurate reading
- **Record readings on permit (if applicable).** Use peak readings (highest readings throughout space)
- **Issue Permit if applicable**
- **Continuously monitor space**

## PERMITS

The Permit (if applicable) must be completed and signed by the Entry Supervisor, all Entrants and Attendants. The controlling Supervisor must be notified of pending entry. All confined spaces employees may enter within the city have been classified as “permit” and “non permit” as required by the Standard.

### Permit Requirements:

The conditions of this permit are presented in the order of accomplishment.

- Notify your Supervisor of the pending entry.
- Ensure monitor calibration (gas) has been done (noted on monitor).
- Ensure ATTENDANT is available (we rely on the host to supply an attendant).
- “Fresh Air” Calibrate monitoring equipment.
- Permits will be filled out by one of the above listed employees, signed by all and placed on clipboard at the confined space entrance. In wet weather, place the permit on the vehicle seat (clearly visible from the outside and doors unlocked).
- Continuously ventilate confined space prior to and during entry.
- Ensure a lifeline and harness is used. Fall protection or fall prevention means must also be used (if deeper than six feet or otherwise not secured) to ensure safe entry and exit of space. A tri-pod would not have to be used if another fall protection system is utilized. Remember, a lifeline must always be used when entering a permit required confined space.
- Notify site Supervisor when entry is terminated.

**Note: *Hot Work Permit*** protocol is required anytime oxygen consuming equipment (welder, torch) or spark producing equipment (grinder, chisel) is used within a confined space. Additional precautionary steps from those listed above include:

- Additional purging of the space of all explosive, hazardous substances or enrich Oxygen.
- Initial testing of the space for accepted oxygen concentrations, LEL (lower explosion limit), CO<sub>2</sub>, and H<sub>2</sub>S.
- If testing alarms sound, do not enter the space until additional purging and ventilation has occurred. Re-testing of the confined space atmosphere is required along with acceptable atmospheric condition prior to entry.
- Continuously monitor atmospheric conditions during entry

### Permit Record Keeping

Ensure Supervisor knows a permit is to be opened and when it will expire. Opened permits will be kept near the confined space opening until cancelled at which time they will be filed and kept for three years.

# FALL PROTECTION

Although fall protection is not covered under the Confined Space Standard (CFR 1910.146) we must be able to retrieve if problems and many of the spaces we enter are below ground or elevated, many over six feet deep. Because of this, the following requirements may apply:

- Tri-pods should:
  - Be used as designed and engineered. Do not use retrieval systems for fall protection or only fall protection when a retrieval system is necessary.
  - Be inspected for cracks/corrosion (pins, legs, hardware, etc)
  - Be rated (printed on pod) for the heaviest possible user (only one person hooked up at a time).
  - Be maintained according to manufacturer requirements.
- NOTE: Inspect tri-pod according to site inspection guidelines before use.
- Harnesses should:
  - Be inspected quarterly for tears, burns, stretching or any other deterioration which may affect its quality and effectiveness as a protective device.
  - Be discontinued (thrown out) after five years of use.
  - Be used with proper connectors (locking)
  - Be hooked up to the single ring on the upper center of the entrants back or the shoulder rings in conjunction with a y- lanyard.
  - Be maintained according to manufacturers specifications
- Synthetic ropes should:
  - Be inspected before use for tears, burns, stretching or any other deterioration that may affect quality and effectiveness as part of a protective system.
  - Be discontinued (thrown out) after five years.

**Note: When only a lifeline is used in lieu of fall protection (under six feet) it must also be of sufficient quality (rated) for removal of entrant in an emergency.**

# OPERATING PROCEDURES

**ENTRY SUPERVISOR**\_(this position most likely will be held by the attendant outside the space or the site Supervisory authority)

## Pre-Entry:

- Ensure attendant is available (we require a minimum of one attendant per space)
- Supervise locking out of equipment, lines & valves (see also Lockout/Tagout).
- Examine potential hazards of interconnected spaces
- Eliminate any ignition sources
- Monitor oxygen-consuming equipment/material
- Examine oxygen enrichment possibilities
- Fire protection system (Fire extinguisher on site/nearby)
- Ensure availability, maintenance, and inspection of harness and lifeline/tri-pod

## Entry:

- Periodically monitor entrant(s)
- Initial/Continuously monitoring of gasses
- Periodically ensure permit requirements are being met.
- Cancel permit in emergency or when entry is complete.

## **ENTRANT(S)** (those entering the space)

### **Pre-Entry:**

- Notify the Entry Supervisor of pending entry.
- Review procedures (operating and rescue-call 911).
- Ensure oxygen-monitoring equipment is adequate.
- Review and verify accuracy of permit.
- Ventilate confined space prior to and during entry.
- Lock out all appropriate equipment, as required.
- Ensure availability, maintenance, and inspection of harness and lifeline/tri-pod
- Have on hand, all [PPE](#) that is to be used (see also Personnel Protective Equipment).
- Review pre-arranged normal and emergency signals.
- Know and review with Entry Supervisor signs of O<sub>2</sub> deprivation (see below).
- Immediately check for gasses exceeding limits. If alarm sounds or monitor fails -- immediately discontinue, re-evaluate the planned entry and issue a new permit.

### **Entry:**

- Abandon space immediately upon command of Entry Supervisor and/or attendant.
- Abandon space immediately if signs/symptoms of O<sub>2</sub> deprivation (see below).
- Abandon space immediately if anything unusual occurs inside or outside the confined space (accident, explosion, odd happenings, etc.).
- Abandon space immediately if any sensor fails.
- Abandon space immediately if sensor alarm sounds.
- Abandon space if feelings of O<sub>2</sub> deprivation or contaminant exposure exists or is suspected.

## **ATTENDANT(S)**

### **Pre-Entry:**

- Review procedures (operating and rescue-call 911).
- Review and verify accuracy of permit.
- Ventilate confined space prior to and during entry.
- Lock out all appropriate equipment, as required.
- Have on hand, all [PPE](#) that is to be used (see also Personnel Protective Equipment).
- Review pre-arranged normal and emergency signals.
- Know and review with Entry Supervisor signs of O<sub>2</sub> deprivation (see below).
- Immediately check for gasses exceeding limits (if alarm sounds or monitor fails -- immediately discontinue, re-evaluate the planned entry and issue a new permit).
- Observe/monitor/communicate with entrant

### **Entry:**

- Evacuate entrant immediately upon command of Entry Supervisor.
- Evacuate entrant immediately if signs/symptoms of O<sub>2</sub> deprivation (see below).
- Evacuate entrant immediately if anything unusual occurs inside or outside the confined space.
- Evacuate entrant immediately if any sensor fails.
- Evacuate entrant immediately if sensor alarm sounds.

**Note:** Attendants and entrants are both required knowing and reviewing the signs and symptoms of *oxygen deprivation* prior to entry. Some of these are as follows:

**Difficulty Breathing, Mental Confusion, Rapid Breathing, Ringing in Ears, Euphoria  
Tingling Fingers, Lack of Coordination, Fingernails and Lips Blue, Belligerence**

If any of these signs are "felt" by an entrant or witnessed by the attendant, evacuation of all entrants must be accomplished immediately. Re-entry is not permitted until space is safe.

### **Cancellation of Permits**

- A Permit is cancelled when:
  - Duties in the space are complete and all entrants are out.
  - When an emergency evacuation is ordered or takes place.
- All permits are cancelled when unauthorized personnel enter the space (we do not share a confined space with other contractors or host personnel).

### **Post Entry:**

- Return confined space entry equipment, noting any repairs or problems with equipment
- Return the entry permit to the confined space manual for record keeping.

## **CONFINED SPACE RESCUE OPERATIONS**

### **Emergency:**

Although lowering and retrieving equipment is used, equipment and processes can fail. If retrieval is not possible without entering the space, the following checklist must be followed.

- Call 911 and request a fire department confined space rescue.
- Notify Site Supervisor
- DO NOT ENTER THE SPACE YOURSELF OR ALLOW ANYONE ELSE TO ENTER UNTIL RESCUERS ARRIVE.
- Shut off all oxygen consuming equipment (welder/gas cylinders).
- Continue to add additional ventilation until rescue has been completed.

# EARTHMOVING EQUIPMENT

The City of Willmar is intent on protecting all employees, vendors, outside contractors and the public from the hazards of Earth Moving Vehicles. We as a city will train and implement this written program in compliance with...

[29 CFR 1926.600](#)

[29 CFR 1926.602](#)

[Minnesota Statute 5207.1000.](#)

These rules apply to but are not limited to: scrapers, loaders, crawler or wheel tractors, bulldozers, compaction equipment, off-highway trucks, graders, rubber tired skid-steer equipment, Backhoe, dump and industrial trucks.

## GENERAL SAFETY FOR EARTH-MOVING EQUIPMENT

### Working Around Equipment

Working around earth-moving equipment is a hazardous part of your job. Because of this, the following are some important things to remember.

- Always back towards equipment
- If you observe abnormalities (front wheels off ground and spinning etc.) notify operator immediately.
- Ensure communication is understood at all times
- Keep all hand tools (shovels etc.) away from equipment
- When marking a depth or spot for operator, move well away from area marked.
- Ensure ground or trench remains stable while working
- Each employee working on the ground shall be provided with and required to wear a high visibility warning vest or other high visibility garments.
- Employees shall be trained initially before beginning work that exposes them to mobile earth-moving equipment. The employer shall retain employee training records for the duration of project.
- Maintain visual contact with operator.
- Maintain a defensive stance at all times/Assume that the operator can not see you
- **Never turn or work with your back to the equipment.**

### Working around utilities

- The estimated location of utility installations, such as sewer, telephone, fuel, electric, water lines, or any other underground installations that reasonably may be expected to be encountered during excavation work shall be determined prior to opening an excavation. Utility companies or owners shall be contacted and advised of the proposed work, and asked to establish the location of the utility underground installations prior to the start of actual excavation. When utility companies or owners cannot respond to a request to locate underground utility installations within 24 hours. When excavation operations approach the estimated location of underground installations, the exact location of the installations shall be determined by safe and acceptable means.
- While the excavation is open, underground installations shall be protected, supported or removed as necessary to safeguard employees.



# APPROACHING MOBILE EARTH-MOVING EQUIPMENT

## Visual, Voice, or Signal communication

The safe work procedures on how to approach mobile earth-moving equipment, whether in use or idling, include:

- Vocal Communication
- A conversation or yelling made towards the operator prior to approaching earth-moving equipment. This, in conjunction with the below is required to ensure both operator and ground worker are aware of each others movements at all time.
- Visual/Communication
- Hand and arm signals must be reviewed before operations begin. These movements along with vocal communication are crucial when working in or around mobile earthmoving equipment.
- Operator responsibilities
- The operator must adhere to the above. When approached by personnel from any angle, the operator must do the following.
  - Place the transmission in neutral
  - Set the parking brake
  - Indicate it is safe to approach the equipment by using assigned communication methods.

## Blind spot identification

- It is the operator's responsibilities to know the locations of blind spots in their equipment. Ensure blind spots are checked before changing directions and when you may be unaware of workers movements on the ground.
- Operator must shift or lean as needed to check blind spots.
- Never assume that workers see your equipment.
- When backing, use extreme caution and back "slowly"
- If the operator is ever in doubt, "stop".
- Always be aware of side and overhead clearances, when in doubt, choose a different path of approach.

## DAILY EQUIPMENT INSTRUCTION

Safe operating procedures and instruction for mobile earth-moving equipment is done on a continuous basis. Policies and procedures shall be reviewed periodically. Communication methods shall be reviewed prior to starting work.

# HEARING CONSERVATION/NOISE EXPOSURE POLICY

The City of Willmar is committed to complying with both the intent and spirit of the Occupational Noise Exposure standard outlined in [29 CFR 1910.95](#).

It is our intent to reduce the occupational noise that employees are exposed to, to below an 8-hour Time Weighted Average (**TWA**) of 85 decibels within our facilities (see below computations). When feasible, this will be done through engineering or administrative controls. Until these controls are in place, and have proven to be effective, hearing protection will be required in specific areas and for specific duties both on and off site while these duties are being performed. In addition, annual hearing tests are currently required for all Fire Department employees. The Safety Coordinator will monitor changes/additions to decibels above 85 in all areas to ensure current and future processes requiring hearing protection are identified and adequate protection is provided.

The procedures outlined in this section of the manual are designed to protect the hearing of our employees and ensure that all employees are in, and will remain in compliance with the above-mentioned standards. It is imperative that all employees follow these procedures.

## Computation of Employee Noise Exposure

<u>Decibels</u>	<u>Hours</u>	<u>Decibels</u>	<u>Hours</u>
90.....	8	110.....	0.5
91.....	7.0	111.....	0.44
92.....	6.1	112.....	0.38
93.....	5.3	113.....	0.33
94.....	4.6	114.....	0.29
95.....	4	115.....	0.25
96.....	3.5	116.....	0.22
97.....	3.0	117.....	0.19
98.....	2.6	118.....	0.16
99.....	2.3	119.....	0.14
100.....	2	120.....	0.125
101.....	1.7	121.....	0.11
102.....	1.5	122.....	0.095
103.....	1.3	123.....	0.082
104.....	1.1	124.....	0.072
105.....	1	125.....	0.063
106.....	0.87	126.....	0.054
107.....	0.76	127.....	0.047
108.....	0.66	128.....	0.041
109.....	0.57	129.....	0.036
		130.....	0.031

Based on a eight-hour time-weighted average sound level (TWA),

# HEARING CONSERVATION PROCEDURES

## MONITORING NOISE

- The Coordinator or Supervisor will ensure sound level readings in all areas are taken whenever:
  - a process changes
  - machines or equipment are added, deleted, or modified
  - jobs are added or changed
  - decibels are unclear entering a worksite.
- Employees will be notified whenever sound level readings will be conducted as well as the results of these readings. Readings taken or given from off site jobs will be distributed to all affected employees. Results will be posted and available through the Safety Coordinator.
- Sound level readings will include, in addition to the decibel levels;
  - name of individual taking readings
  - time and dates of the readings
  - name, model and serial number of instrument used
  - date and time of last instrument calibration

**Note: The Safety Coordinator will retain sound level readings indefinitely.**

## CONTROLS

Controls of noise reduction will be in the form of:

- Engineering controls
- Administrative controls
- Hearing protection

### Engineering Controls

Periodically, the Safety Coordinator, Supervisor or Department Head will conduct a Noise Hazard Survey of our facilities to determine what, if any, engineering controls could be instituted to reduce or confine noise.

The survey will determine if:

- walls/partial barriers are feasible and would be effective
- machines are in good repair (bearings, pumps and equipment mufflers are in place, etc.)
- the use of technology advances is feasible
- relocation of machines would be effective

### Administrative Controls

The Coordinator, Supervisor or Department Head will periodically review the requirements to:

- limit the number of employees exposed to intermittent noisy operations thru scheduling.
- eliminate unnecessary "spike" noise
- limit the duration and determine the timing of noisy operations.

## Hearing Protection

The Coordinator, Supervisor or Department Head will be held responsible to ensure that all employees are provided with and wear the appropriate hearing protection when and where required. The proper use, care, fitting, and cleaning requirements should be reviewed with all employees.

- Current Hearing Protection Available:
  - Foam Plugs
  - Muffs
    - Employees that fail to wear hearing protection or wear it improperly will be subject to disciplinary action.
    - Hearing protectors will be provided, at no cost, to all employees working in areas above 85db TWA. The below describes in detail the use, care, fitting, cleaning and how to determine attenuation of each protector available. If hearing protection becomes worn or damaged, it must be replaced.

We are always working on reducing workplace decibels by:

- Monitoring the nature of required tasks in all areas/locations
- Administrative controls limiting duration and frequency of machine/equipment usage.
- Engineering Controls including walls, barriers, etc.

In areas where the levels in both time and decibels are exceeded, those affected employees must also be audiometrically tested in accordance with this section (see **first page of this section** for computations). Currently, only employees in the fire department receive annual hearing tests. Hearing protection must also be worn when the decibels are above 85 or when noise hazards are unclear. All hearing protection issued is adequate in protecting employees during all jobs.

## The proper use, care, fitting, and cleaning of hearing protectors

### USE

All hearing protectors are designed to reduce (not eliminate) the amount of harmful, continuous noise that reaches the inner ear. This is called "attenuation" and is indicated by a noise reduction rating (N.R.R.) number found on the package or box that contains the hearing protectors (the greater the number, the more effective the protection). In order to select the best protection for you, refer to the sound level readings in your area.

Example: If your work area has a reading of 100db, you will need hearing protection with a N.R.R. of 15 (or more) to reduce the noise level to the minimum acceptable level of 85db. Published N.R.R.'s should be by 5db to 7db to account for hearing protection "leaks" from talking, facial shifts etc.. Using our example of a work area with 100db sound readings and a selection of ear plugs with a N.R.R. of 30 the math would look like this:  
**100db + 5 to 7db - a NRR of 30 = 77db**

Most areas in our facilities are well below 100db sound levels, consequently, selection of hearing protection based on the above math, in the sample should be ample.

**All hearing protection available offers adequate protection in all areas. Choice need only be based on comfort.**

## **CARE**

### **Ear Muffs:**

Although this type of protector can be used over and over again, care should be taken to keep the device clean as well as protect the soft, pliable "muff" area that rests against the head. When this shows signs of deterioration such as cracking, peeling or becomes brittle, discard and replace cushions.

### **Plugs-foam:**

Since the earplugs are of the foam compressible variety, care should be taken to have clean hands when inserting this type to prevent/minimize contaminants from entering the ear canal. When compressibility is diminished or the plugs are dirty (these cannot be cleaned) discard and get a new pair.

## **FITTING**

### **Ear Muff:**

-Place both ear pieces over the ear so that both ears are encased within the earpiece.

-Adjust the headband so it is snug against the skull.

### **Plugs-foam:**

-Compress the earplug by firmly rolling the plug between the thumb and forefinger.

-Insert the plug into the ear canal while pulling the top of the ear upward and outward.

-Release the top of the ear after plug insertion and allow the plug to expand filling the ear canal.

## **CLEANING**

### **Ear Muffs:**

Earmuffs can and should be cleaned with a solution of warm water, a mild detergent and a damp cloth. Do not immerse in water. Gently wipe the pads and dry.

**Plugs-foam: DO NOT CLEAN.** When plugs are dirty, discard and replace with new ones.

## **AUDIOMETRIC TESTING**

Currently, only fire department employees are required to have annual hearing tests. If at some point other department employees become exposed to noise levels of 90 decibels or greater, over a **TWA** of 8 hours they, also, must have an audiometric tests:

- annually
- within 6 months of exposure

### **Baseline Audiograms**

Baseline audiograms are generally the results of the first audiometric tests obtained on an employee. To ensure accuracy, we must ensure employee has not been exposed to workplace sound for at least 14 hours before testing unless hearing protection can be worn consistently. An annual audiogram may be substituted for a baseline audiogram (provided a baseline has been established) when in the judgment of the audiologist, otolaryngologist, or physician who is evaluating the audiogram:

- The standard threshold shift revealed by the audiogram is persistent; or
- The hearing threshold shown in the annual audiogram indicates significant improvement over the baseline audiograms.

### **Standard Threshold Shifts**

A standard threshold shift (STS) is a change in hearing threshold relative to the baseline audiogram of an average of 10 decibels or more at 2000, 3000, and 4000 Hz in either ear.

## **Annual Audiogram**

Each at risk employee will have an audiogram performed every 12 months. This audiogram will be compared to the employee's baseline to determine its validity and to define whether a STS has occurred.

**Note:** If an employee suffers a STS, we may require a re-test within 30 days and consider the results of the re-test as the annual audiogram.

## **Evaluation**

An audiologist, otolaryngologist, or physician who will determine whether there is a need of further evaluation will review problem audiograms. If a comparison of the annual audiogram to the baseline audiogram indicates a STS has occurred, the Safety Coordinator will notify the employee, in writing, within 21 days of the determination. Employees not using hearing protection will be fitted with protectors, trained in their use and care, and required to use them. Employees already required to use hearing protection will be refitted and retrained in their use, and if necessary, provided with protectors offering greater attenuation. If additional testing is deemed appropriate by our physician or medical pathology of the ear caused or aggravated by wearing of hearing protectors is suspected, the employee will be referred for an annual audiological evaluation or otological examination. If the suspected medical pathology of the ear is unrelated to the use of hearing protection, the employee will be informed of the need for an otological examination.



# RESPIRATORY PROTECTION POLICY

The City of Willmar is committed to complying with both the intent and spirit of the Respiratory Protection Standard as outlined in [29 CFR 1910.134](#). This program covers all affected employees with the exception of the Police and Fire Departments who have separate programs to ensure their specific compliance requirements.

It is our intent to eliminate atmospheric contaminants whenever possible. Every effort will be made to reduce the amount of contaminants to well below the permissible exposure levels (PEL) or below the published P.E.L. for an 8- hour time weighted average. When this is not possible, contract labor will be utilized on a per job basis.

Since we are committed to eliminating the possibility of overexposure to known contaminants, respirators currently are not required during any of our operations. However, we may allow the use of respirators on a voluntary basis (with permission).

One Strap Dust Masks are not respirators and are recommended and available for use by employees during certain jobs. Two strap respirators can also be used after distribution and clear understanding of APPENDIX D

Any jobs where the use of respirators may be required must be evaluated, discussed, and resolved according to the following:

1. Reviewing the Material Safety Data Sheets
2. Reviewing possible engineering solutions
3. Reviewing possible administrative solutions
4. Outsourcing the job

[APPENDIX D](#) from [29CFR 1910.134](#) has been provided to employees wearing respirators on a voluntary basis.

Employees are encouraged to discuss any exposure concerns with their Supervisor and Safety Coordinator before starting any job where irritant chemicals are utilized.

**NOTE: A minimum of the above information must be reviewed with employees using a dusk mask only.**

## RESPIRATORY REQUIREMENTS

(Those using negative pressure respirators for voluntary purposes)

- Written standard operating procedures governing the selection and use of respirators.
- Respirators shall be selected on the basis of irritants to which the worker is exposed.
- The user shall be instructed and trained in the proper use of respirators and their limitations.
- Respirators shall be regularly cleaned and disinfected. Those used by more than one worker shall be thoroughly cleaned and disinfected after each use.
- Respirators shall be stored in a convenient, clean, and sanitary location.
- Respirators used routinely shall be inspected during cleaning. Worn or deteriorated parts shall be replaced.
- Surveillance of work area conditions and degree of employee exposure or stress shall be maintained.
- Regular inspection and evaluation to determine the continued effectiveness of the program shall be done by the Safety Coordinator.
- Persons assigned to tasks recommending use of respirators shall be evaluated to determine if they are physically able to perform the work and use the equipment. The local physician shall determine what health and physical conditions are pertinent. The respirator user's medical status should be reviewed periodically (for instance, annually).
- Respirators shall be selected from among those jointly approved by the Mine Safety and Health Administration and the National Institute for Occupational Safety and Health under the provision of 30 CFR part 11.

### Selection of Respirators:

The selection of effective respirators cannot be made without identifying the irritants and the duties in our facilities where these irritants occur. These are listed below:

#### Duties

Touch up Painting  
Grinding  
Welding  
Sanding  
Cutting

#### Irritants

Paint fumes -- Particulates  
Dust--Particulates  
Fumes—Particulates  
Dust  
Fumes-Dust

**The types of respirators we use for these duties are dust masks and possibly Negative pressure masks.**

**Respirator Instructions provided by the manufacturer and shipped with each respirator must be reviewed before use.**

The specific irritants known to be present while working in individual areas was the criteria used in the selection of respirators.

# TRENCHING/EXCAVATING POLICY

The City of Willmar is committed to complying with both the spirit and intent of the Trenching/Excavation Standard as outlined in [29CFR 1926 .650 thru .652](#)

It is imperative that all employees strictly adhere to the proper soil analysis, protective system implementation, and work procedures as outlined in this Section. These procedures are designed to protect entrants, operators and rescue personnel from the hazards associated with trenching/excavations

NOTE: Currently, only public works and wastewater employees are qualified and trained to enter trenches at this time.

## TRENCH BOXES

**Trench boxes** are different from shoring because, instead of shoring up or otherwise supporting the trench face, they are intended primarily to protect workers from cave-ins and similar incidents. The excavated area between the outside of the trench box and the face of the trench should be as small as possible. The space between the trench boxes and the excavation side are backfilled to prevent lateral movement of the box. Shields may not be subjected to loads exceeding what the system was designed to withstand.

**Note: We have two Trench Box(s) available for use. The current dimensions of the trench box(s) are 8X8. Remember, Trench Boxes are required in a trench deeper than 5 feet.**

## SLOPING AND BENCHING.

**SLOPING.** Maximum allowable slopes for excavations less than 20 ft (6.09 m) based on soil type and angle to the horizontal are as follows:

<b>Soil type</b>	<b>Height/Depth ratio</b>	<b>Slope angle</b>
Stable Rock	Vertical	90°
Type A	¾:1	53°
Type B	1:1	45°
Type C	1½:1	34°
Type A (short-term)	½:1	63°
(For a maximum excavation depth of 12 ft)		

## UTILITIES

Utility companies must be contacted to determine the location of all lines, pipes, cables, etc. The number to call in the state of Minnesota is **1-800-252-1166**. When all utilities are marked, excavation can begin. If, after 24 hours, utility personnel have not responded, we may cautiously begin excavation.

All underground pipes, wire, etc. must be supported and or protected while working in the trench.

**SPOIL TEMPORARY SPOIL.** Temporary spoil must be placed no closer than 2 ft (0.61 m) from the surface edge of the excavation, measured from the nearest base of the spoil to the cut. This distance should not be measured from the crown of the spoil deposit. This distance requirement ensures that loose rock or soil from the temporary spoil will not fall on employees in the trench. Spoil should be placed so that it channels rainwater and other run-off water away from the excavation. Spoil should be placed so that it cannot accidentally run, slide, or fall back into the excavation.

**PERMANENT SPOIL.** Permanent spoil should be placed at some distance from the excavation. Permanent spoil is often created where underpasses are built or utilities are buried. The improper placement of permanent spoil, i.e. insufficient distance from the working excavation, can cause an excavation to be out of compliance with the horizontal-to-vertical ratio requirement for a particular excavation. This can usually be determined through visual observation. Permanent spoil can change undisturbed soil to disturbed soil and dramatically alter slope requirements.

**SURFACE CROSSING OF TRENCHES.** Surface crossing of trenches should be discouraged; however, if trenches must be crossed, such crossings are permitted only under the following conditions:

- Vehicle crossings must be designed by and installed under the supervision of a registered professional engineer.
- Walkways or bridges must be provided for foot traffic. These structures shall:
  - have a safety factor of 4
  - have a minimum clear width of 20 in (0.51 m)
  - be fitted with standard rails and
  - extend a minimum of 24 in (.61 m) past the surface edge of the trench.

**INGRESS AND EGRESS.** Access to and exit from the trench require the following conditions:

- Trenches 4 ft or more in depth should be provided with a fixed means of egress.
- Spacing between ladders or other means of egress must be such that a worker will not have to travel more than 25 ft laterally to the nearest means of egress.
- Ladders must be secured and extend a minimum of 36 in (0.9 m) above the landing.
- Metal ladders should be used with caution, particularly when electric utilities are present.

**EXPOSURE TO VEHICLES.** Procedures to protect employees from being injured or killed by vehicle traffic include: remember good oral hygiene

- Providing employees with and requiring them to wear warning vests or other suitable garments marked with or made of reflectorized or high-visibility materials.
- Requiring a designated, trained flag person along with signs, signals, and barricades when necessary.

**EXPOSURE TO FALLING LOADS.** Employees must be protected from loads or objects falling from lifting or digging equipment. Procedures designed to ensure their protection include:

- Employees are not permitted to work under raised loads.
- Employees are required to stand away from equipment that is being loaded or unloaded.
- Equipment operators or truck drivers may stay in their equipment during loading and unloading if the equipment is properly equipped with a cab shield or adequate canopy.

**WARNING SYSTEMS FOR MOBILE EQUIPMENT.** The following steps should be taken to prevent vehicles from accidentally falling into the trench:

- Barricades must be installed where necessary.
- Hand or mechanical signals must be used as required.
- Stop logs must be installed if there is a danger of vehicles falling into the trench.
- Soil should be graded away from the excavation; this will assist in vehicle control and channeling of run-off water.

**HAZARDOUS ATMOSPHERES AND CONFINED SPACES.** Employees shall not be permitted to work in hazardous and/or toxic atmospheres. Such atmospheres include those with:

- Less than 19.5% or more than 23.5% oxygen;
- A combustible gas concentration greater than 20% of the lower flammable limit; and
- When testing for atmospheric contaminants, the following should be considered:
- Testing should be conducted before employees enter the trench and should be done regularly to ensure that the trench remains safe.
- The frequency of testing should be increased if equipment is operating in the trench.
- Testing frequency should also be increased if welding, cutting, or burning is done in the trench.

**EMERGENCY RESCUE EQUIPMENT.** Emergency rescue equipment is required when a hazardous atmosphere exists or can reasonably be expected to exist. Requirements are as follows:

- Respirators must be of the type suitable for the exposure. Employees must be trained in their use and a respirator program must be instituted.
- Attended (at all times) lifelines must be provided when employees enter bell-bottom pier holes, deep confined spaces, or other similar hazards.
- Employees who enter confined spaces must be trained.

**STANDING WATER AND WATER ACCUMULATION.** Methods for controlling standing water and water accumulation must be provided and should consist of the following if employees are permitted to work in the excavation:

- Use of special support or shield systems approved by a registered professional engineer
- Water removal equipment, i.e. well pointing used and monitored by a competent person
- Safety harnesses and lifelines used in conformance with [29 CFR 1926.104](#).
- Surface water diverted away from the trench
- Employees removed from the trench during rainstorms.
- Trenches carefully inspected by a competent person after each rain and before employees are permitted to re-enter the trench

**NOTE: SEE INSPECTION DOCUMENT IN COMPETENT PERSON PACKET OR THROUGH YOUR SUPERVISOR.**

# **TREE TRIMMING OPERATIONS**

## **(CHAINSAW/POLESAW/AERIAL LIFT/CHIPPER)**

The City of Willmar is intent on protecting all employees from the hazards associated with the use of chainsaw/polesaws, aerials, and chippers within the community. To this extent general rules and requirements have been outlined in this section so designed to minimize the risk. This program was developed in accordance to [29 CFR 1910.266](#) and [29 CFR 1926.453](#),

## **PERSONAL PROTECTIVE EQUIPMENT**

The Personal Protective equipment below is provided for all personnel involved in chainsaw/polesaw, chipping, and trimming operations. It is important we assure that personal protective equipment, including any personal protective equipment provided is maintained, inspected and remain in serviceable condition.

### **Chaps**

Each employee who operates a chainsaw must wear the leg protection provided. Choose the size of leg protection that covers the full length of the thigh to the top of the boot on each leg to protect against contact with a moving chainsaw.

Exception: This requirement does not apply when an employee is working as a climber, or if management demonstrates that a greater hazard is posed by wearing leg protection in the particular situation

### **Foot Protection**

Each employee who operates a chainsaw must wear logging boots or a steel toe work boot that are waterproof or water repellent, cover and provide support to the ankle and cut-resistant (metatarsal) which will protect the employee against contact with a running chainsaw.

### **Head**

Each employee who operates a chainsaw/polesaw, aerial lift, loading a chipper, and/or works in an area where there is potential for head injury from falling or flying objects must wear an approved hardhat.

### **Face /Eye Protection**

Each employee operating a chainsaw/polesaw, aerial lift, loading a chipper, or works in an area where there is potential for facial injury must wear face and eye protection. Employees may wear logger-type mesh screens and safety glasses when performing chainsaw/polesaw operations.

### **Hearing Protection**

Each employee who operates or works near a chainsaw/polesaw, aerial lift, chipper, or works in an area where there is a potential for decibels to exceed 85db must wear hearing protection with a noise reduction rating (NRR) adequate enough to reduce levels to below the 85db threshold. See also *Hearing Conservation Program*.

## **GENERAL OPERATIONAL SAFETY**

### **Chainsaw/polesaw**

- Portable fire extinguishers are provided, maintained, and located in each vehicle.
- Ensure each tool (chainsaws/polesaws), including any tool provided by an employee, and are inspected before initial use during each work shift. At a minimum, the inspection must include the following:
  - Handles and guards, to assure that they are sound, tight fitting, properly shaped, free of splinters and sharp edges, and in place
  - Controls, to assure proper function



- Chainsaw/polesaw chains, to assure proper adjustment
- Chainsaw/polesaw mufflers, to assure that they are operational and in place
- Chain brakes and nose shielding devices, to assure that they are in place and function properly
- Cutting edges, to assure that they are sharp and properly shaped
- All other safety devices, to assure they are in place and function properly
- The cutting edge of each tool must be sharpened in accordance with manufacturer's specifications whenever it becomes dull during the work shift.
- Only use tools for purposes that it has been designed.
- Each tool must be stored in the provided location when not being used at a work site.
- Secure all equipment/tools in transport
- The chainsaw must be operated and adjusted in accordance with the manufacturer's instructions.
- The chainsaw must be fueled at least 10 feet (3 m) from any open flame or other source of ignition.
- The chainsaw must be started at least 10 feet (3 m) from the fueling area.
- The chainsaw must be started on the ground or where otherwise firmly supported. Drop starting a chainsaw is prohibited.
- The chainsaw/polesaw throttle must be at full through cut
- The chainsaw must be started with the chain brake engaged.
- The chainsaw must be held with the thumbs and fingers of both hands encircling the handles during operation.
- The chainsaw/polesaw operator must be certain of footing before starting to cut.
- The chainsaw must not be used in a position or at a distance that could cause the operator to become off-balance, to have insecure footing, or to relinquish a firm grip on the saw.
- Prior to felling any tree, the chainsaw/polesaw operator must clear away brush or other potential obstacles that might interfere with cutting the tree or using the retreat path.
- The chainsaw must not be used to cut directly overhead.
- The chainsaw must be carried in a manner that will prevent operator contact with the cutting chain and muffler.
- The chainsaw must be shut off or the throttle released before the feller starts his retreat.
- The chainsaw must be shut down or the chain brake must be engaged whenever a saw is carried further than 50 feet (15.2 m).
- The chainsaw must be shut down or the chain brake must be engaged when a saw is carried less than 50 feet if conditions such as, but not limited to, the terrain, underbrush and slippery surfaces, may create a hazard for an employee.

## **Aerial Lifts**

### **Before Operating Aerial Lifts**

- Do not modify aerial lift without written permission
- Check safety devices, operating controls before each use
- Check area in which aerial lift will be used for:
  - Level surface (Do not exceed manufacturer slope recommendations)
  - Holes, drop-offs, bumps, debris, etc.
  - Overhead obstructions and overhead power lines
  - Stable surface
  - Other hazards

### **Set outriggers, brakes, wheel chocks**

- Preventing Electrocutions
  - Non-electrical workers must stay at least 10 feet away from overhead power lines.
  - Electrical workers must de-energize/insulate power lines (call utility beforehand).
  - Use only insulated buckets when working near overhead power lines

- Annually check insulation on buckets
- Preventing Tip-Overs
  - Do not exceed manufacturer rated load capacity limits
  - Do not travel to job location with lift in elevated position.
  - Set up proper work zone protection when working near traffic
  - Positioning of lifts
    - Do not drive near drop-offs or holes.
    - Do not raise platform on uneven or soft surfaces.
    - Do not drive onto uneven or soft surfaces when elevated.
    - Do not raise platform on slope or drive onto slope when elevated.
    - Do not raise platform in windy or gusty conditions.
- Fall Protection
  - Fall protection is required (full body harness with lanyard or body belt with 2-foot lanyard as restraint device)
  - Fall arrest systems (harness plus lanyard to stop a fall). Keep in mind:
    - Can tip over some boom lifts and scissor lifts due to fall stopping force
    - Fall restraint systems intended to prevent falls are preferred
    - Full body harness plus lanyard designed for size of lift platform
  - Always close entrance chains or doors
  - Stand on floor of bucket or lift platform
  - Do not climb on or lean over guardrails

## Chippers

- Never reach into a chipper while it is operating.
- Do not wear loose-fitting clothing around a chipper.
- Always follow the manufacturer's guidelines and safety instructions.
- Use earplugs, safety glasses, hard hats and gloves.
- Workers should be trained on the safe operation of chipper machines. Always supervise new workers using a chipper to ensure that they work safely and never endanger themselves or others.
- Protect yourself from contacting operating chipper components by guarding the in-feed and discharge ports, and preventing the opening of the access covers or doors until the drum or disc completely stops.
- Prevent detached trailer chippers from rolling or sliding on slopes by chocking the trailer wheels.
- Maintain a safe distance (i.e., two tree or log lengths) between chipper operations and other work/workers.
- When servicing and/or maintaining chipping equipment (i.e., "un-jamming") use a lockout system to ensure that the equipment is de-energized.

# HOT WORK

The City of Willmar has committed to comply with the intent and spirit of [OSHA 29 CFR 1910.252-254](#) and NFPA 51B.

In order to be in compliance, the City of Willmar will identify locations/processes/jobs where the potential of a fire exists during heat/spark/flame producing equipment and the implementation of a "Hot Work Permit".

- Ensure that all individuals involved in the hot work operations are trained in the safe operation of their equipment and the safe use of the process. These individuals must have an awareness of the risks involved and understand the emergency procedures in the event of a fire.
- Determine site-specific flammable materials, hazardous processes, or other potential fire hazards present or likely to be present in the work location.
- Conduct effective gas monitoring in the work area using a properly calibrated combustible gas detector prior to and during hot work, even in areas where a flammable atmosphere is not anticipated.
- In work areas where flammable liquids and gases are stored and handled, drain and/or purge all piping and equipment before hot work is conducted.
- Provide safety supervision for outside contractors conducting hot work. Inform contractors about site specific hazards including the presence of flammable materials.
- Ensure combustibles are protected from ignition by the following means:
  - Move the work to a location free from combustibles.
  - If the work cannot be moved, ensure the combustibles are moved to a safe distance or have the combustibles properly shielded against ignition.
  - Ensure hot work is scheduled such that operations that could expose flammables or combustibles to ignition do not occur during hot work operations.

**If any of these conditions cannot be met, then hot work must not be performed.**

- Determine that fire protection and extinguishing equipment are properly located and readily available.
- Ensure sufficient local exhaust ventilation is provided to prevent accumulation of any smoke/fume.
- Ensure that a fire watch is posted at the site when:
  - Hot work is performed in a location where other than a minor fire might develop, or where the following conditions exist.
  - Combustible materials in building construction or contents are closer than 35 ft to the point of hot work.
  - Combustible materials are more than 35 ft away but are easily ignited by sparks.
  - Wall or floor openings are within 35 feet and expose combustible materials in adjacent areas. This includes combustible materials concealed in walls or floors.
  - Combustible materials are adjacent to the opposite side of partitions, walls, ceilings, or roofs and are likely to be ignited.

Where a fire watch is not required, the CHWS shall make a final inspection  $\frac{1}{2}$  hour after the completion of hot work operations to detect and extinguish possible smoldering fires.

## Hot Work Operator (HWO)

The hot work operator shall handle the equipment safely and perform work so as not to endanger lives and property. Specific duties include:

- No hot work shall be conducted without specific written authorization from the CHWS via completion of the Hot Work Permit.
- The operator must cease hot work operations if unsafe conditions develop.
- The operator must notify the CHWS for reassessment of the situation in the event of suspected unsafe conditions or concerns expressed by affected persons.

## Fire Watch

The fire watch is an individual posted in specific circumstances, as described above. The function of the fire watch is to observe the hot work and monitor conditions to ensure that a fire or explosion does not occur as a result of the work performed. The fire watch is authorized to stop any unsafe operation or activity. Specific duties and responsibilities include:

- Watch for fires, smoldering material or other signs of combustion.
- Be aware of the inherent hazards of the work site and of the hot work.
- Ensure that safe conditions are maintained during hot work operations and stop the hot work operations if unsafe conditions develop.
- Have fire-extinguishing equipment readily available and be trained in its use.
- Extinguish fires when the fires are obviously within the capacity of the equipment available. If the fire is beyond the capacity of the equipment, sound the alarm immediately.
- Be familiar with the facilities and procedures for sounding an alarm in the event of a fire.
- A fire watch shall be maintained for at least 30 minutes after completion of hot work operations in order to detect and extinguish smoldering fires.
- More than one fire watch shall be required if combustible materials that could be ignited by the hot work operation cannot be directly observed by a single fire watch (e.g. in adjacent rooms where hot work is done on a common wall).

## Hot Work Operational Requirements:

- Hot work is allowed only in areas that are or have been made fire-safe. Hot work may only be performed in either designated areas or permit-required areas.
- A designated area is a specific area designed or approved for such work, such as a maintenance shop or a detached outside location that is of noncombustible or fire-resistive construction, essentially free of combustible and flammable contents, and suitably segregated from adjacent areas.
- A permit-required area is an area made fire-safe by removing or protecting combustibles from ignition sources.
- Hot work is not allowed:
  - In sprinklered buildings if the fire protection system is impaired;
  - In the presence of explosive atmospheres or potentially explosive atmospheres ( e.g. on drums previously containing solvents)or;
  - In explosive atmospheres that can develop in areas with an accumulation of combustible dusts (e.g. grain silos).

## Hot Work Permit

Before hot work operations begin in a non-designated location, a completed hot work permit prepared by the CHWS is required. Based on local conditions, the CHWS must determine the length of the period, not to exceed 24 hours, for which the hot work permit is valid.

The following conditions must be confirmed by the CHWS before permitting the hot work to commence:

- Equipment to be used (e.g. welding equipment, shields, personal protective equipment, fire extinguishers) must be in satisfactory operating condition and in good repair.
- The floor must be swept clean for a radius of 35 ft if combustible materials, such as paper or wood shavings are on the floor,
- Combustible floors (except wood on concrete) must be
  - o kept wet or be covered with damp sand ( note: where floors have been wet down, personnel operating arc welding or cutting equipment shall be protected from possible shock)., or
  - o is protected by noncombustible or fire-retardant shields.
- All combustible materials must be moved at least 35 ft away from the hot work operation. If relocation is impractical, combustibles must be protected with fire-retardant covers, shields or curtains. Edges of covers at the floor must be tight to prevent sparks from going under them, including where several covers overlap when protecting a large pile.
- Openings or cracks in walls, floors, or ducts within 35 ft of the site must be tightly covered with fire-retardant or noncombustible material to prevent the passage of sparks to adjacent areas.
- If hot work is done near walls, partitions, ceilings, or roofs of combustible construction, fire-retardant shields or guards must be provided to prevent ignition.
- If hot work is to be done on a wall, partition, ceiling, or roof, precautions shall be taken to prevent ignition of combustibles on the other side by relocating combustibles. If it is impractical to relocate combustibles, a fire watch on the opposite side from the work must be posted.
- Hot work must not be attempted on a partition, wall, ceiling, or roof that has a combustible covering or insulation, or on walls or partitions of combustible sandwich-type panel construction.
- Hot work that is performed on pipes or other metal that is in contact with combustible walls, partitions, ceilings, roofs, or other combustibles must not be undertaken if the work is close enough to cause ignition by conduction.
- Fully charged and operable fire extinguishers that are appropriate for the type of possible fire shall be available immediately at the work area. These extinguishers should be supplied by the group performing the hot work. The fire extinguishers normally located in a building are not considered to fulfill this requirement.
- If hot work is done in proximity to a sprinkler head, a wet rag shall be laid over the head and then removed at the conclusion of the welding or cutting operation. During hot work, special precautions shall be taken to avoid accidental operation of automatic fire detection or suppression systems (for example, special extinguishing systems or sprinklers).
- Nearby personnel must be suitably protected against heat, sparks, and slag.

## Work Closeout:

- A fire watch shall be maintained for at least 30 minutes after completion of hot work operations in order to detect and extinguish smoldering fires.
- The CHWS shall inspect the job site 30 minutes following completion of hot work and close out the permit with the time and date of the final check.
- The completed Hot Work Permit shall be retained for 6 months following completion of the project.